

Appl. No. : 09/659,999
Filed : September 12, 2000

REMARKS

With this amendment, Claim 7 is canceled, Claims 1 and 3 are amended, and Claim 8 has been added. Claims 1-6 and 8 are thus presented for further Examination.

The specific changes to the specification and the amended claims are shown on a separate set of pages attached hereto and entitled VERSION WITH MARKINGS TO SHOW CHANGES MADE, which follows the signature page of this Amendment. On this set of pages, the insertions are underlined while the deletions are stricken through.

Rejections Under 35 U.S.C. § 103

The Examiner has rejected Claims 1, 2 and 7 under 35 U.S.C. § 103(a) as being unpatentable over Urani in view of Bixler et al. The Examiner has rejected Claims 3-6 under 35 U.S.C. § 103(a) as being unpatentable over Urani in view of Bixler et al. and Call.

Claim 3 has been rewritten as an independent claim. Claim 7 has been cancelled.

Applicants submit that Bixler et al. is non-analogous art. As discussed in M.P.E.P. § 2141.01(a), "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned."

Applicants submit that Bixler et al. is not in the same field as the present application. The present invention is directed to a fuse connection box, while Bixler et al. is directed to an electrical connector for a multi-conductor cable.

Furthermore, Applicants submit that Bixler is not reasonably pertinent to the particular problem with which the present application was concerned. The present application is directed to the problem of the expense associated with separate terminal shipments and protective bags, required by prior art fuse connection boxes, to prevent short-circuits or other problems in the output side terminals attached to the ends in the period from production to assembly in the housing, as described in the background section of the present application.

In contrast, Bixler describes that it is increasingly more complicated to accommodate relatively large numbers of conductors, in particular when the multi-conductor cable is a shielded cable, which terminate in relatively small connectors. Bixler et al. also focused on providing an electrical connector having guide means for the discrete wires, trimming the wires or conductors

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to appropriate lengths, isolating exposed ends of the conductors, providing strain relief for the cable as well as the conductors, providing ground connections for drain wires in the cable, providing reliable connections between the shielding components of the connector and other features which would appear to be impossible to incorporate in a single, small connector for a large number of conductors and respective terminals. Bixler was trying to resolve the problem of organizing the large numbers of conductors.

Furthermore, Bixler et al. is directed to a cable having multiple insulated conductors. There is no need to shield the conductors. Accordingly, the cable of Bixler does not require a protective bag to shield the terminals, as the multiple conductors of Bixler are already shielded.

Even if it were assumed that Bixler is analogous art, the cited art does not teach or suggest a fuse connection box as presently claimed. As described in the Amendment dated September 17, 2002, the terminals as described in the cited art are not retained in the housing halves prior to assembly of the pre-assembled housing halves, such that the terminals are substantially enclosed within the housing.

The Examiner asserts that Bixler et al. discloses the concept of having first and second members (22a-b) being separately pre-assembled with first and second wires (40), such that the first side wire (40) is substantially enclosed within first side member (22a) and such that the second wire (40) is substantially enclosed within second side member (22b).

Applicants respectfully disagree. Bixler et al. does not teach a connection box, wherein the wire is substantially enclosed within each housing. As shown in Figures 2, 3, 4 and 4B of Bixler et al., the wires are not substantially enclosed within the housings. Bixler discloses that the connector permits the conductors to project beyond a longitudinal edge of each elongated guide member 22a, 22b. The guide members 22a, 22b are for sorting, positioning, and separating the conductors from one another. The edges of the guide member 22a, 22b provide a reference surface along which the ends of the conductors can be trimmed. See Col. 5, lines 38-64. None of the conductors of Bixler et al. are at all within guide members 22a, 22b, as shown in Figures 3 and 4. It would actually be undesirable to substantially enclose the conductors, as there are so many, in the guide members 22a, 22b. Furthermore, a cover member 24 is required to join and engage guide members 22a and 22b to form a first housing. The later installed cover member 24 is required to produce the substantial enclosure of the conductors.

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In contrast, in the present application, the side housings substantially enclose the wires, such that additional pieces or protective bags are not required.

Furthermore, the fuse connection box as described in the present application protects a terminal or plurality of terminals, while the electrical connector described in Bixler is actually used to accurately organize and connect the large quantities of conductors of the cable, and does not serve to protect the conductors.

As described in the Summary of the Invention, the particular arrangement of the fuse connection box, as recited in Claims 1 and 3, provides several advantages over the cited art. The bags for protection of the terminals used in the prior art are not required, therefore improving the efficiency of assembly. The side housings are also of identical shape, which reduces the cost and improves assembly of the fuse connection box.

Accordingly, Applicant maintains Claims 1 and 3 are patentable over Urani, Bixter and Call. As Claims 4-6 and 8 are dependent on independent Claims 1 and 3, Claims 2, 4-6 and 8 are patentable for at least these reasons.

New Claim

As indicated above, Applicant has added new Claim 8. Support for this claim is found in the specification. Applicant submits that this new claim also includes a combination of features not taught or suggested by the prior art. Thus, Applicant respectfully submits that this claim is in condition for allowance, and such action is respectfully requested.

CONCLUSION

The applicant has endeavored to address all of the Examiner's concerns as expressed in the outstanding Office Action. Accordingly, amendments to the claims pursuant to statutory section 103, the reasons therefor, and arguments in support of the patentability of the pending claim set are presented above. In light of these amendments and remarks, reconsideration and withdrawal of the outstanding rejections is respectfully requested.

Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, do not narrow the claims, and it is believed that the claims would satisfy the statutory requirements for patentability without the entry of such amendments.

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Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language. Furthermore, the new claim presented above is of course intended to avoid the prior art, but is not intended as a replacement or substitute of any cancelled claims. They are simply additional specific statements of inventive concepts described in the application as originally filed.

If the Examiner has any questions which may be answered by telephone, he is invited to call the undersigned directly.

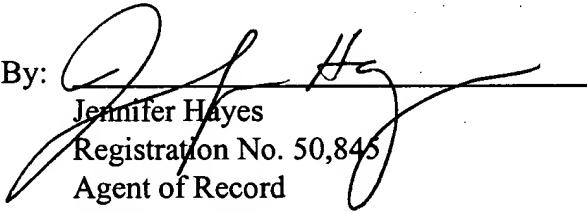
Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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Dated: March 6, 2003

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

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Applicants have amended the claims as follows:

1. (Amended) A fuse connection box comprising a fuse and a housing for attaching the fuse:

said housing comprising a first side housing in which a first side terminal of an end of a first side wire is pre-assembled, such that said first side wire is substantially enclosed within said first side housing, and a second side housing in which a second side terminal of an end of a second side wire is separately pre-assembled, such that said second side wire is substantially enclosed within said second side housing

said first side housing and second side housing having portions for engagement with each other, and

said first side housing and second side housing being engaged to form a single housing in which said fuse can be attached.

3. (Amended) A fuse connection box ~~as set forth in Claim 1, comprising a fuse and a housing for attaching the fuse:~~

said housing comprising a first side housing in which a first side terminal of an end of a first side wire is pre-assembled, such that said first side wire is substantially enclosed within said first side housing, and a second side housing in which a second side terminal of an end of a second side wire is pre-assembled such that said second side wire is substantially enclosed within said second side housing,

said first side housing and second side housing having portions for engagement with each other,

said first side housing and second side housing being engaged to form a single housing in which said fuse can be attached,

said first side housing and said second side housing are of identical shapes having first engagement portions at one end in the direction of arrangement of fuses and having second engagement portions of shapes engaging with the first engagement portions at the other end,

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said fuse connection box further comprising a protective cover attached to said first side housing and second side housing so as to cover said fuse in a state where said first side housing and said second side housing are connected and said fuse is attached.